

IN THE CLAIMS

Please cancel claim 6 without prejudice or disclaimer.

Please add the following new claims 46-60.

This listing of the claims replaces all prior versions of the claims in the application.

1. (Original) An automated microarray printer machine having the capability of automatically transporting a plurality of microarray workpieces before and after printing operations by a printer device of said microarray printer machine, said automated microarray printer machine comprising:

a storage unit for storing said plurality of microarray workpieces;

a work station; and

a retrieval mechanism for retrieving one of said plurality of microarray workpieces from said storage unit and presenting said microarray workpiece to said workstation.

claims 2-22 canceled

23. (Original) A method within a microarray printer machine for retrieving a workpiece in a storage rack and transporting said workpiece to a workstation, said microarray printer machine having a loader arm with a vacuum chuck, said method comprising:

determining the location of the workpiece in said storage rack;

moving said loader arm in close proximity to said workpiece in said storage rack;

extending said vacuum chuck under said workpiece;

activating said vacuum chuck to hold said workpiece on said loader arm; and

moving said loader arm and workpiece to said workstation.

claims 24-45 canceled

46. (New) A retrieval unit comprising:
a storage unit having:
a storage frame;
a storage rack; and
a first motor assembly or pneumatic actuator,
said storage rack stores a workpiece and is slidably mounted to said storage frame, and said first motor or pneumatic actuator translates said storage rack in a first plane; and
a lifter unit having:
a load frame including a linear rail;
a loader arm including a vacuum chuck or suction cup and a third motor assembly; and
a second motor assembly or pneumatic actuator that translates said loader arm in a second plane,
said loader arm is slidably mounted to the linear rail of said loader frame, and
said third assembly motor translates said loader arm in a third plane.
47. (New) The retrieval unit of claim 46, wherein the first plane is a horizontal plane.
48. (New) The retrieval unit of claim 46, wherein said first motor assembly or pneumatic actuator is mounted to the storage frame.
49. (New) The retrieval unit of claim 46, wherein said first motor assembly or pneumatic actuator is mounted to the storage rack.
50. (New) The retrieval unit of claim 46, wherein said first motor assembly is a brushless DC motor.

51. (New) The retrieval unit of claim 46, where said first motor assembly or pneumatic actuator is electrically controlled by a computer.

52. (New) The retrieval unit of claim 46, wherein the storage rack includes a slot that holds a workpiece container.

53. (New) The retrieval unit of claim 52, wherein the slot includes a sensor to detect the presence of said workpiece container.

54. (New) The retrieval unit of claim 46, wherein said second plane is a vertical plane.

55. (New) The retrieval unit of claim 46, wherein the third motor assembly rotates in a counter-clockwise direction to extend said vacuum chuck or suction cup in said third plane and in a clockwise direction to retract said vacuum chuck or suction cup.

56. (New) The retrieval unit of claim 46, wherein said third plane is a horizontal plane.

57. (New) The retrieval unit of claim 46, wherein said third plane is a horizontal plane.

58. (New) The retrieval unit of claim 46, wherein the workpiece is a microscope slide.

59. (New) The retrieval unit of claim 46, wherein said storage frame includes a linear rail.

60. (New) The retrieval unit of claim 46, wherein said storage frame includes a protective cover.